

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A dental therapeutic instrument for infiltrating and/or rinsing dental tissue or cavities bounded by dental tissue, ~~in particular dental tissue or cavities bounded by dental tissue,~~ with a therapeutic liquid, the dental therapeutic ~~[[said]]~~ instrument comprising;having

- a) a storage container for the therapeutic liquid;
- b) a cannula for introducing the therapeutic liquid into the tissue or into the cavities;
- c) a pump which supplies the therapeutic liquid to the cannula from the storage container; and,
- d) a pump which withdraws therapeutic liquid from the tissue by suction via the cannula,

~~characterised in that~~wherein

the storage container (2; 102), the cannula (42; 142) and the pumps (15, 43, 47; 160, 180, 194) are combined into a handpiece-type unit.

2. (Currently Amended) ~~Therapeutic~~The dental therapeutic instrument ~~according to of~~ Claim 1, ~~characterised in that~~wherein the pump that supplies the therapeutic liquid to the cannula (42; 142) and the pump that aspirates the therapeutic liquid via the cannula (42; 142) are implemented by a single pump (15, 43, 47; 160, 180, 194), the working direction of which is reversible.

3. (Currently Amended) ~~Therapeutic~~The dental therapeutic instrument ~~according to of~~ Claim 2, ~~wherein~~characterised in that the single pump comprises a double-acting, linearly mobile piston ~~[[45]]~~ which with one end region ~~[[48]]~~ borders a first working space ~~[[44]]~~ which is connected to the reservoir via a check valve ~~[[42]]~~ and with the opposite end region ~~(45b)~~ borders a second working space ~~[[28]]~~ which communicates with the cannula ~~[[42]]~~, the

first working space [(44)] communicating with the second working space [(28)] via a flow path (20, 21) in which a check valve [(22)] is situated which permits a flow of the therapeutic liquid only from the first working space [(44)] into the second working space [(28)].

4. (Currently Amended) ~~The dental therapeutic instrument according to of~~
Claim 3, wherein characterised in that the flow path leading from the first working space [(44)] to the second working space [(28)] is a bore (20, 21) which is directed axially through the piston [(45)].

5. (Currently Amended) ~~The dental therapeutic instrument according to Claim 3 or 4, characterised in that of Claim 3, wherein~~ the cross-section of the end region [(48)] of the piston [(45)] adjoining the first working space [(44)] is smaller than the cross-section of the end region (45b) of the piston [(45)] adjoining the second working space [(28)].

6. (Currently Amended) ~~The dental therapeutic instrument according to one of Claims 2 to 5, characterised in that of Claim 2, further comprising~~ a control valve [(31)] is provided which in a first position connects the second working space [(28)] to the cannula via a flow path (33, 37) that is capable of being flowed through in both directions and in a second position connects the second working space [(28)] to the cannula [(42)] and to a further flow path (10, 49, 50, 51) leading to the reservoir [(2)] via a flow path (34, 39, 40) that is capable of being flowed through only in the direction towards the cannula [(42)], a check valve [(43)] which exclusively permits a flow in the direction towards the second working space [(28)] being situated in the further flow path (10, 49, 50).

7. (Currently Amended) ~~The dental therapeutic instrument according to of~~
Claim 6, characterised in that wherein the control valve comprises a slide [(31)] which is capable of being displaced linearly in a bore [(30)].

8. (Currently Amended) ~~The dental therapeutic instrument according to one of Claims 3 to 7, characterised in that Claim 3, wherein~~ the double-acting piston [(45)] is driven

by an actuating piston [(43)] which is acted upon on one side by a compression spring [(57)] and which on the opposite side adjoins a pressure chamber [(44)] which in turn communicates with the outlet of a compressed-air pulse generator [(47)].

9. (Currently Amended) ~~The dental therapeutic instrument according to of~~
Claim 8, ~~characterised in that~~ wherein the inlet of the compressed-air pulse generator [(47)] is capable of being connected to a compressed-air supply cable [(5)] for conventional dental handpieces via a standard coupling.

10. (Currently Amended) ~~The dental therapeutic instrument according to one of~~
Claims 3 to 5, ~~characterised in that of Claim 3, wherein~~ the reservoir [(2)] is a detachably fitted syringe which exhibits a smooth-running syringe piston [(58)].

11. (Currently Amended) ~~The dental therapeutic instrument according to of~~
Claim 10, ~~characterised in that~~ wherein the syringe [(2)] is a re-usable syringe consisting of autoclavable material.

12. (Currently Amended) ~~The dental therapeutic instrument according to of~~
Claim 10, ~~characterised in that~~ wherein the syringe [(2)] is a disposable syringe.

13. (Currently Amended) ~~The dental therapeutic instrument according to of~~
Claim 12, ~~characterised in that~~ wherein the disposable syringe [(2)] has no piston rod.

14. (Currently Amended) ~~The dental therapeutic instrument according to Claim 1~~
~~or 2, characterised in that of Claim 1, wherein~~ the storage container is constituted by a syringe (402) with a syringe body (159) and a syringe piston (160), which is connected to a linearly mobile output member (184) of a reversible drive device (180, 190) for the syringe piston (160).

15. (Currently Amended) ~~The dental therapeutic instrument according to of~~
Claim 14, ~~characterised in that~~ wherein the drive device (180, 190) exhibits an electric motor

~~(497)~~ and a battery ~~(200)~~ energising said motor.

16. (Currently Amended) ~~Therapeutic-The dental therapeutic~~ instrument ~~according to Claim 14 or 15, characterised in that of Claim 14, wherein~~ the drive device ~~(180, 190)~~ exhibits control electronics which are programmed in such a way that the syringe piston ~~(460)~~ is capable of being moved back and forth at a certain repetition frequency.

17. (Currently Amended) ~~Therapeutic-The dental therapeutic~~ instrument ~~according to of Claim 16, characterised in that wherein~~ the control electronics are programmed in such a way that the syringe piston ~~(460)~~ executes a larger stroke in the course of the inward movement than in the course of the outward movement.

18. (Currently Amended) ~~Therapeutic-The dental therapeutic~~ instrument ~~according to Claim 16 or 17, characterised in that of Claim 16, wherein~~ the control electronics can be operated in a second operating mode in which the syringe piston ~~(460)~~ exclusively executes an inward movement.